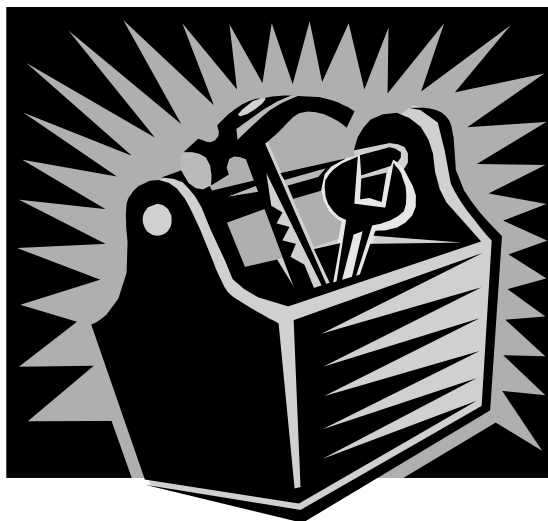


TRADE AND INDUSTRY STANDARDS

- 100. Auto Collision
- 200. Auto Mechanics
- 300. Carpentry
- 400. Electronics
- 500. Offset Printing
- 600. Welding
- 700. Drafting
- 800. Heating and Air Conditioning
- 900. SkillsUSA - VICA
- 1000. Machine Tool



Trade and Industrial

TIO1000 FRAMES, WHEELS, AND TIRES. [01/01/94].

Note: After viewing this video, students will understand the types of frames used on the automobile; identify the construction and design of automotive wheels; and demonstrate an understanding of tire design and construction. Run time is 15 minutes.

TIO1001 WINDOWS AND DOORS: INSTALLATION AND REPAIRS. [01/01/94].

Note: This "how-to" video includes installation techniques for the following: windows in new construction; a new window in an existing wall; new sashes and jamliners in an existing frame; French, entrance and sliding glass doors; door hardware; and interior passage, bi-fold and pocket doors. Run time is 45 minutes.

TIO2006 BACKYARD MECHANIC: MINOR DENT REPAIR. [01/01/95].

Note: This video demonstrates a simple approach to minor dent repair. Run time is 28 minutes.

TIO2007 BACKYARD MECHANIC: STARTER INSTALLATION. [01/01/95].

Note: This video demonstrates a simple approach to starter installation. Run time is 13 minutes.

TIO2010 POWER AND TORQUE. [01/01/95].

Note: This program clears up the mystery surrounding horsepower, torque and governor droop. Run time is 12 minutes.

TIO2011 TROUBLESHOOTING: A LESSON IN CRITICAL THINKING. [01/01/95].

Note: This video provides assistance to the service writer/managers in ways to discuss engine problems with the customer. Several scenarios and examples provide the re-enforcement of the troubleshooting methodology. Additional sections on advanced testing procedures provide accurate tests to assure complete repairs before returning the equipment to the customer. Runs 13 mins.

TIO2012 THEORIES OF OPERATION VOLUME 1. [01/01/95].

Note: This series of videos are loped into a single cassette for use in educational programs for students as well as for use by existing technicians. These sections cover four basic topics which need to be understood in order to gain a full understanding of the operation and function of a Briggs and Stratton air cooled gasoline engine. The four separate video selections are: carburetor theory, valve theory and repair procedures, electrical system (alternator theory) and governor theory and troubleshooting. Run time is 64 mins.

TI02013 CARBURETOR TROUBLESHOOTING. [01/01/95].

Note: This video is divided into three main categories: starting problems, performance problems and leakage. Examples, tests, and repairs are presented as well as "tricks of the trade". An in-depth look is taken at isolating governor problems from carburetor issues. Run time is 20 minutes.

TI02014 ADVANCED CARBURETION THEORY. [01/01/95].

Note: This video gives a brief review of theory and basic carburetor physics followed by state-of-the-art computer graphics animation illuminating such topics as pilot jets, emulsion tubes and vapor lock at the inlet needle annulus. Computer animation achieves what the best carburetor cut-a-way programs struggle to do - map carburetor circuits so the viewer has a full understanding of what's going on inside the "mysterious" carburetor. Run time is 19 minutes.

TI02015 SUSPENSION SYSTEMS. [01/01/94].

Note: After viewing this video, students will understand the differences between different types of suspension systems; identify the kinds of springs used on vehicles; and demonstrate an understanding of the function and operation of the hydraulic shock absorber. Run time is 15 minutes.

TI02016 STEERING SYSTEMS. [01/01/94].

Note: After viewing this video, students will demonstrate an understanding of the components used to steer the vehicle; compare rack and pinion with parallelogram steering, and describe how steering ratios affect steering response. Run time is 15 minutes.

TI02017 STEERING ANGLES. [01/01/94].

Note: After viewing this video, students will be able to identify the reference lines on which steering angles are based; describe the angles commonly measured during a wheel alignment; and demonstrate an understanding of how steering angles change when the vehicle is steered into a turn. Runs 15 minutes.

TI02020 AUTOMOTIVE TEST EQUIPMENT. Bergwall, [1998].

Note: With the proper test equipment at your disposal and the knowledge of how to properly use them and read the findings, the chances of achieving successful diagnostic results are greatly enhanced. This program is aimed at drivability diagnostics with some tools presented that are universal in application.

TI02021 CHARGING SYSTEMS EXPLAINED. Bergwall, [1999].

Note: Introduce your students to the constant supply of electrical energy in today's automobiles made possible by the combustion process in the engine. This 5-part program demonstrates how all the components work together to guarantee a reliable source of electricity. To understand the concepts explained, the students should have a fundamental understanding of electricity. Key ASE certification concepts are presented.

TIO2022 ELECTRICITY FOR AUTO TECHNICIANS. Bergwall, [1999].

Note: Using an automotive perspective, this series is the ideal way to introduce your entry-level automotive students to the fundamentals of electricity. Live shop sequences with a technician combined with narration explains electrical principles and establishes an understanding of the basics. Each video includes a profile highlighting a busy technicians daily activities. Key ASE certification concepts are presented. 1999.

TIO2023 TROUBLESHOOTING: THE ELECTRICAL SYSTEM. Bergwall, [1999].

Note: Few things perplex an automotive technician like those associated with the electrical system. This 5-part program illustrates common electrical malfunctions and solves them by using a systematic approach to diagnosis and repair. The viewers will learn how to use trouble codes and flow charts as their guides through the complicated electrical system.

TIO2024 THE AUTOMOTIVE COMPUTER. Bergwall, [1999].

Note: Provide your students with a comprehensive overview of the computer electronic system used in today's automobile. This 4-part program explains why computer technology is used in the car, how the system works and what the computer actually does to control engine performance.

TIO2025 ANTI-LOCK BRAKE SYSTEM TROUBLESHOOTING. Bergwall, [1997].

Note: Viewers will review basic maintenance and safety procedures, then see how to follow a systematic approach when troubleshooting ABS systems. This program demonstrates a visual inspection before looking at ABS self-diagnostic capabilities and more involved diagnostics, along with illustrating good customer communication skills.

TIO2026 COMMERCIAL DRIVERS EXAM - PART I. SDSU, PA Dept. of Transportation,

Note: This three tape series is designed to help drivers prepare for the Commercial Drivers Exam. The program covers hauling hazardous chemicals, pre-inspection of the truck, air brakes, operating techniques, and much more. After each segment is a self-test. Total run time for all three tapes is 320 minutes. 1997.

TIO2027 COMMERCIAL DRIVERS EXAM - PART II. SDSU, PA Dept. of Transportation,

Note: This three tape series is designed to help drivers prepare for the Commercial Drivers Exam. The program covers hauling hazardous chemicals, pre-inspection of the truck, air brakes, operating techniques, and much more. After each segment is a self-test. Total run time for all three tapes is 320 minutes. 1997.

TIO2028 COMMERCIAL DRIVERS EXAM - PART III. SDSU, PA Dept. of Transportation,

Note: This three tape series is designed to help drivers prepare for the Commercial Drivers Exam. The program covers hauling hazardous chemicals, pre-inspection of the truck, air brakes, operating techniques, and much more. After each segment is a self-test. Total run time for all 3 tapes is 320 minutes. 1997.

TI02029 WORKING SAFELY IN THE AUTO SHOP. Bergwall, [1996].

Note: This CD-Rom or diskette set contains four sections: general safety practices, working safely under the car, working safely on automotive systems and hazardous waste. This program contains lessons and practice tests.

TI02030 WORKING SAFELY IN THE AUTOMOTIVE SHOP: GENERAL SAFETY PRACTICES. Bergwall,

Note: This video promotes good safety habits by stressing maintenance and safe use of tools and equipment along with details of handling gasoline and propellants. Proper dress and the organization of a shop are included showing the importance of a professional image. Runs 17 mins. 1996

TI02031 WORKING SAFELY IN THE AUTOMOTIVE SHOP: WORKING SAFELY UNDER THE CAR. Bergwall, [1996].

Note: This video demonstrates safe removal and repair of tires and details proper handling of map gas around the fuel system. Run time is 18 minutes.

TI02032 WORKING SAFELY IN THE AUTOMOTIVE SHOP: WORKING SAFELY ON AUTOMOTIVE SYSTEMS. Bergwall, [1996].

Note: This video demonstrates safe practice for working around fans and belts in the electrical system. Run time is 17 minutes.

TI02033 WORKING SAFELY IN THE AUTOMOTIVE SHOP - HAZARDOUS WASTE: LAWS AND PROCEDURES FOR HANDLING DISPOSAL. Bergwall, [1996].

Note: This video introduces Occupational Safety and Health Administration and Environmental Protection Agency and details disposal of and correct labeling of hazardous materials. Run time is 16 minutes.

TI02034 ELECTRONICS FOR AUTO TECHNICIANS: UNDERSTANDING RESISTORS. Bergwall, [1996].

Note: This video reviews fundamentals of electricity and explains the application of electricity in electronic systems. Run time is 16 minutes.

TI02035 ELECTRONICS FOR AUTO TECHNICIANS: INDUCTORS/CAPACITORS. Bergwall, [1996].

Note: This video introduces the concept of magnetic induction and shows how induction is used on automotive systems. Run time is 17 minutes.

TI02036 ELECTRONICS FOR AUTO TECHNICIANS: UNDERSTANDING SEMICONDUCTORS. Bergwall,

Note: This video describes the role of semiconductors in today's cars, presents P and N type material and explains automotive applications for diodes and zener diodes. Run time is 16 minutes. 1996

TI02037 ELECTRONICS FOR AUTO TECHNICIANS: UNDERSTANDING TRANSISTORS. Bergwall, [1996].

Note: This video explains the importance of transistors to modern automobiles

and produces a clear explanation of the similarities and differences between NPN and PNP type transistors. Run time is 18 minutes.

TI02038 ELECTRONICS FOR AUTO TECHNICIANS: INTEGRATED CIRCUITS. Bergwall, [1996].
Note: This video presents a comprehensive description of how integrated circuits are used in an automobile and describes the concepts of the integrated circuit. Runs 18 minutes.

TI02039 AUTOMOTIVE TEST EQUIPMENT: SCAN TOOLS AND SENSOR SIMULATORS. Bergwall, [1996].
Note: This video explains on-board diagnostic systems and shows operations of sensor simulators. Run time is 21 minutes.

TI02040 AUTOMOTIVE TEST EQUIPMENT: LAB SCOPES, METERS AND BREAK-OUT-BOXES. Bergwall, [1996].
Note: This video examines meters and break-out-boxes and explains an I-BOB. Run time is 23 minutes.

TI02041 AUTOMOTIVE TEST EQUIPMENT: PORTABLE EXHAUST GAS ANALYZERS AND MOTOR VAC FUEL SYSTEM TESTER. Bergwall, [1996].
Note: This video illustrates the use of a portable exhaust gas analyzer. It also demonstrates how to use a motor vac fuel system. Run time is 19 minutes.

TI02042 AUTOMOTIVE ENGINE OVERHAUL: BASIC PRINCIPLES AND TROUBLESHOOTING. Bergwall, [1996].
Note: This video introduces double overhead cam engine, details compression testing and shows how to evaluate spark plugs. Run time is 20 minutes.

TI02043 AUTOMOTIVE ENGINE OVERHAUL: CYLINDER HEAD REMOVAL. Bergwall, [1996].
Note: This video explains procedures for removing and inspecting cylinder heads, examines removal of the timing chain cover, and shows how to remove cam assembly. Run time is 24 minutes.

TI02044 AUTOMOTIVE ENGINE OVERHAUL: SHORT BLOCK DISASSEMBLY. Bergwall, [1996].
Note: This video examines short block disassembly, highlights removal of oil pan/pump and piston ring, and explains assembly procedures for crankshaft and bearing. Run time is 18 minutes.

TI02045 AUTOMOTIVE ENGINE OVERHAUL: FINAL ASSEMBLY. Bergwall, [1996].
Note: This video examines reinstalling engine and testing motor, details reassembly of cylinder heads and shows how to install camshaft assembly. Run time is 28 minutes.

TI02046 SMALL ENGINES: BASIC OPERATION. BERGWALL, [1996].
Note: This video examines the basic parts and uses of a small engine and describes the operation of a four-stroke cycle engine. Run time is 19 minutes.

TIO2047 SMALL ENGINES: DISASSEMBLY OF ENGINE. BERGWALL, [1996].

Note: This video covers the complete, step-by-step disassembly of a small engine. Run time is 11 minutes.

TIO2048 SMALL ENGINES: COMMON REPAIR PROCEDURES. BERGWALL, [1996].

Note: This video examines several common repair procedures including how to repair and replace valves, pistons, and the connecting rod. Runs 12 minutes.

TIO2049 SMALL ENGINES: ELECTRONIC IGNITION SYSTEM. BERGWALL, [1996].

Note: This video details differences between the breaker-point system and the solid state or electronic ignition. Run time is 15 minutes.

TIO2050 SMALL ENGINES: ASSEMBLY OF ENGINE. BERGWALL, [1996].

Note: This video details how to properly assemble an engine and details the use of specific tools. Run time is 15 minutes.

TIO2051 PORT FUEL INJECTION: AN INTRODUCTION. BERGWALL, [1996].

Note: This video explains the advantages of fuel injection by reviewing combustion and introduces electronic control module. Runs 12 minutes.

TIO2053 PORT FUEL INJECTION: BASIC TROUBLESHOOTING. BERGWALL, [1996].

Note: This video details simple repair procedures and describes solutions to common problems. Run time is 17 minutes.

TIO2054 TROUBLESHOOTING PORT FUEL INJECTION: SYSTEM MAINTENANCE. BERGWALL, [1996].

Note: This video details steps for basic oxygen sensor maintenance and introduces proper procedures for maintaining a port fuel injection system. Run time is 17 minutes. 1996

TIO2055 TROUBLESHOOTING PORT FUEL INJECTION: INJECTOR SERVICE. BERGWALL, [1996].

Note: This video describes all cleaning procedures for the injectors and explains how to properly check fuel flow in fuel rails and injectors. Run time is 17 minutes.

TIO2056 TROUBLESHOOTING PORT FUEL INJECTION: INJECTOR REPLACEMENT. BERGWALL, [1996].

Note: This video describes all the steps for properly removing and/or replacing injectors. Run time is 17 minutes. 1996

TIO2057 PORT FUEL INJECTION: THROTTLE BODY SERVICE. BERGWALL, [1996].

Note: This video details regular maintenance including idle air control replacement and explains throttle body carbon build up. Runs 13 minutes.

TIO2058 TROUBLESHOOTING PORT FUEL INJECTION: FLOW CHARTS. BERGWALL, [1996].

Note: This video details the importance of determining what is wrong and explains how to follow a flow chart. Run time is 11 minutes.

TI02059 PORT FUEL INJECTION: TROUBLE CODES. BERGWALL, [1996].

Note: This video details the flowchart method of troubleshooting and examines GM Trouble Codes 21-23-33. It details the use of hand-held scanner for accessing codes and determining problems. Run time is 12 minutes.

TI02060 BASIC AUTOMOTIVE JOBS: USING REFERENCE MATERIAL. Bergwall, [1994].

Note: This video shows how to use Owner's Factory Service, Motor Mitchell, Chilton, and Hayes manuals and demonstrates the procedure for basic lube and filter service. Run time is 15 minutes.

TI02061 BASIC AUTOMOTIVE JOBS: UNDERHOOD MAINTENANCE. Bergwall, [1994].

Note: This video details the procedure for basic vehicle underhood inspection, describes basic battery service and maintenance, and shows how to perform fluid checks. Run time is 21 minutes.

TI02062 BASIC AUTOMOTIVE JOBS: ROAD SERVICE. Bergwall, [1994].

Note: This video describes preparation and procedures for providing road service, shows how to safely jump start a dead battery and change a flat tire, and details the maintenance and service of the exhaust system. Run time is 15 minutes.

TI02063 BASIC AUTOMOTIVE JOBS: COMPONENT REPLACEMENT. Bergwall, [1994].

Note: This video shows how to locate and service an oil leak, how to replace a valve cover gasket, demonstrates testing and replacing spark plugs, and describes the use of a service manual to determine proper firing order. Run time is 18 minutes.

TI02064 AUTOMOTIVE STARTING SYSTEMS: HOW ELECTRIC MOTORS WORK.

Bergwall, [1996]. Note: This video describes the role of starting systems, presents a history of cranking, and addresses magnetic push. Run time is 14 minutes.

TI02065 AUTOMOTIVE STARTING SYSTEMS: INSIDE THE CRANKING MOTOR.

Bergwall, [1996]. Note: This video expands electric motor description and operation of cranking motors and details location and function of coils. Run time is 12 minutes.

TI02066 AUTOMOTIVE STARTING SYSTEMS: STARTING THE CAR. Bergwall, [1996].

Note: This video describes how components work together to crank the engine, mechanical advantage, and the over-running clutch. Run time is 12 minutes.

TI02067 AUTOMOTIVE STARTING SYSTEMS: SYSTEM TESTING. Bergwall, [1996].

Note: This video explains the headlight method of system analysis, describes diagnosis of various solenoid problems and introduces the voltage drop test. Run time is 14 minutes.

TI02068 AUTOMOTIVE STARTING SYSTEMS: COMPONENT SERVICE AND REPAIR. Bergwall.
Note: This video presents procedures for hands-on analysis of cranking motor, introduces growler tests, and explains procedures in common bench tests.
Run time is 13 minutes. 1996

TI02069 THE AUTOMOTIVE COMPUTER: EXPLAINING THE BLACK BOX. Bergwall, [1996].
Note: This video explains the role of the computer in modern automobiles and introduces sensors-actuators as part of the computer system. Runs 16 minutes.

TI02070 THE AUTOMOTIVE COMPUTER: INPUT-SENSORS. Bergwall, [1996].
Note: This video reviews basic electric principles and explains how sensors work. Run time is 17 minutes.

TI02071 THE AUTOMOTIVE COMPUTER: OUTPUT-ACTUATORS. Bergwall, [1996].
Note: This video explains how actuators convert computer commands into engine control. Run time is 15 minutes.

TI02072 THE AUTOMOTIVE COMPUTER: THE COMPUTER IN ACTION. Bergwall, [1996].
Note: This video explains how the computer actually processes input and presents a diagnostic approach to computerized automobiles. Run time is 13 minutes.

TI02073 CHARGING SYSTEMS EXPLAINED: THE BATTERY. Bergwall, [1996].
Note: This video introduces secondary wet cell batteries, explains the role of the charging system and its components and describes charging as reversal of a chemical reaction. Run time is 18 minutes.

TI02074 CHARGING SYSTEMS EXPLAINED: THE ALTERNATOR. Bergwall, [1996].
Note: This video introduces rotor-stator-diode assembly, describes demand for electrical energy on modern automobiles and details the differences between Wye-wound and Delta-wound stators. Run time is 14 minutes.

TI02075 CHARGING SYSTEMS EXPLAINED: FLUX LINE INTERACTION. Bergwall, [1996].
Note: This video shows rotor rotation, details the flux line interaction between rotor and stator, and demonstrates procedure of three-phase alternating current. Run time is 16 minutes.

TI02076 CHARGING SYSTEMS EXPLAINED: THE VOLTAGE REGULATOR. Bergwall, [1996].
Note: This video explains why a voltage regulator is needed, demonstrates operation of Delco Remy SI Regulator and shows how resistors and zener diodes work together to turn systems on/off. Run time is 14 minutes.

TIO2077 CHARGING SYSTEMS EXPLAINED: TROUBLESHOOTING. Bergwall, [1996].

Note: This video describes undercharge-overcharge, shows how to troubleshoot a General Motors CS-144 alternator and presents analysis of abnormal charging system operation. Run time is 14 minutes.

TIO2078 DRIVABILITY TROUBLESHOOTING-HESITATION PROBLEMS: IGNITION RELATED PROBLEMS. Bergwall, [1996].

Note: This video demonstrates how to diagnose hesitation caused by ignition problems, explains insulation tests and shows how to evaluate spark timing and circuit breakdown. Run time is 27 minutes.

TIO2079 DRIVABILITY TROUBLESHOOTING-HESITATION PROBLEMS: FUEL INJECTION-RELATED PROBLEMS. Bergwall, [1996].

Note: This video shows how to perform fuel pressure tests and explains tests of load sensors. Run time is 26 minutes.

TIO2080 DRIVABILITY TROUBLESHOOTING-HESITATION PROBLEMS: CARBURATION RELATED PROBLEMS. Bergwall, [1996].

Note: This video explains what to look for during visual inspection of accelerator pump circuit and demonstrates performance evaluation. Run time is 27 minutes.

TIO2081 DRIVABILITY TROUBLESHOOTING-HESITATION PROBLEMS: THE ROAD TEST. Bergwall, [1996].

Note: This video examines the difference between light and hard acceleration problems and shows how to evaluate cold-warm drivability problems. Run time is 22minutes.

TIO2082 TROUBLESHOOTING ANTI-LOCK BRAKES : SYSTEM SIMILARITIES AND DIFFERENCES. Bergwall, [1996].

Note: This video illustrates various anti-lock brake system types and applications, wheel slips and steering controls, compares integral verses non-integral designs, and demonstrates modulator and speed sensor operation. Run time is 19 minutes.

TIO2083 TROUBLESHOOTING ANTI-LOCK BRAKES: MAINTENANCE AND BASIC DIAGNOSTICS. Bergwall, [1996].

Note: This video presents anti-lock brake system safety precautions, explains brake fluid and hygnoscopies, details code retrieval and clearing codes, and explains latching vs. non-latching codes. Run time is 19 minutes.

TIO2084 TROUBLESHOOTING ANTI-LOCK BRAKES: WORK ORDERS - TORONADO AND TAURUS. Bergwall, [1996].

Note: This video features case studies of anti-brake system failures on two non-integral systems with ABS fault codes stored in memory and uses two

vehicles as examples--a toronado and a taurus. Run time is 19 minutes.

TIO2085

TROUBLESHOOTING ANTI-LOCK BRAKES: WORK ORDERS - GRAND PRIX AND BONNEVILLE. Bergwall, [1996].

Note: This video features case studies of anti-lock brake system failures on two non-integral systems and uses two vehicles as examples--a 1989-90 Grand Prix and a 1990 Pontiac Bonneville. Run time is 20 minutes.

TIO2086

AUTOMOTIVE EMISSIONS EXPLAINED: WHAT ARE EMISSIONS? Bergwall, [1994].

Note: This video explains carbon monoxide, hydrocarbons, and oxides of nitrogen, describes photochemical smog, and details air pollution and environmental effects. Run time is 19 minutes.

TIO2087

AUTOMOTIVE EMISSIONS EXPLAINED: MECHANICAL EMISSIONS CONTROLS. Bergwall, [1994].

Note: This video describes precombustion and postcombustion approaches to emissions control, explains valve timing and its effect on emissions, and introduces positive crankcase ventilation. Run time is 21 minutes.

TIO2088

AUTOMOTIVE EMISSIONS EXPLAINED: ELECTRONIC EMISSIONS CONTROLS. Bergwall, [1994].

Note: This video describes the integration of electronic controls to emission systems, explains the role of the computer as emissions control center, introduces oxygen sensors, and explains speed density verses mass air flow sensing of incoming air. Run time is 19 minutes.

TIO2089

AUTOMOTIVE EMISSIONS EXPLAINED: TROUBLESHOOTING EMISSION CONTROL DEVICES. Bergwall, [1994].

Note: This video introduces detection/diagnosis of system malfunctions and shows how to look for degraded contaminated, defective oxygen sensors and how to check the PCV--EECS system. Run time is 17 minutes.

TIO2090

AUTOMOTIVE SAFETY SYSTEMS EXPLAINED: ACTIVE SAFETY SYSTEMS. Bergwall, [1996].

Note: This video provides an overview of anti-lock brakes, explains the operation of the transmission shift interlock, and explores how steering suspension and braking systems are used to avoid accidents. Run time is 23 minutes.

TIO2091

AUTOMOTIVE SAFETY SYSTEMS EXPLAINED: PASSIVE SAFETY SYSTEMS. Bergwall, [1996].

Note: This video explains safety systems that require no driver action, describes how safety belts contribute to safety, explains vehicle design protection features, and illustrates how lighting, instruments, controls, and visibility affect safety. Run time is 23 minutes.

TIO2092

AUTOMOTIVE SAFETY SYSTEMS EXPLAINED: INFLATABLE RESTRAINTS. Bergwall, [1996].

Note: This video explains the conditions required for systems deployment, the energy reserve function, the operation of crash sensors and coil assembly, and illustrates construction of driver/passenger inflatable restraints. Run time is 23 minutes.

TIO2093

AUTOMOTIVE SAFETY SYSTEMS EXPLAINED: INFLATABLE RESTRAINT SERVICE. Bergwall, [1996].

Note: + This video details how to disarm the system, explains trouble-code, diagnosis, demonstrates inflator module removal procedures and examines the procedures for coil replacement. Run time is 23 minutes.

TIO2094

4-WHEEL ALIGNMENT: ALIGNMENT ANGLES. Bergwall, [1998].

Note: This video defines alignment and identifies the steering angles. It also describes the benefits of proper wheel alignment. Run time is 20 minutes.

TIO2095

4-WHEEL ALIGNMENT: PRE-ALIGNMENT INSPECTION. Bergwall, [1998].

Note: This video shows the purpose of the pre-alignment road test. The components to be inspected before a wheel alignment and the common signs of wear in steering and suspension systems are also discussed. Run time is 20 minutes.

TIO2096

4-WHEEL ALIGNMENT: ALIGNMENT EQUIPMENT. Bergwall, [1998].

Note: This video describes the basic function of wheel sensors and explains the three basic steps in the computer alignment process. It also familiarizes the viewer with alignment equipment. Run time is 20 minutes.

TIO2097

4-WHEEL ALIGNMENT: 4-WHEEL ALIGNMENT PROCEDURES. Bergwall, [1998].

Note: This video explains the importance of order in adjustment of the different angles. The viewer will learn the proper set up for insuring accurate measurement of the different angles and the importance of the post alignment road test. Run time is 20 minutes.

TIO2098

BASIC MATH FOR AUTO TECHNICIANS: NUMBERS, FRACTIONS AND DECIMALS. Bergwall, [1996].

Note: This video explains how numbers are part of a language that can be used to depict systems in a car and shows how to divide with fractions and decimals. Run time is 24 minutes.

TI02099

BASIC MATH FOR AUTO TECHNICIANS: ADDITION AND SUBTRACTION. Bergwall, [1996].

Note: This video uses practical automotive examples to demonstrate the addition and subtraction of fractions and decimals. Run time is 23 minutes.

TI02099

BASIC MATH FOR AUTO TECHNICIANS: MULTIPLICATION AND DIVISION. Bergwall, [1996].

Note: This video introduces formulas and shows how formulas like Ohm's law are used to solve car problems. Run time is 21 minutes.

TI02100

BASIC MATH FOR AUTO TECHNICIANS: PERCENTAGES, RATIOS AND RATES. Bergwall, [1996]. Note: This video explains the use of numbers to compare quantities. Runs 19 minutes.

TI02101

DISTRIBUTORLESS IGNITION EXPLAINED: POINT TYPE SYSTEM. Bergwall, [1996].

Note: This video introduces breaker-point ignition type and fundamentals of electromagnetism. Run time is 12 minutes.

TI02102

DISTRIBUTORLESS IGNITION EXPLAINED: ELECTRONIC IGNITION SYSTEMS AND ELECTRONIC SPARK TIMING (EST) Bergwall, [1996].

Note: This video introduces the fundamentals of electronic ignition, explains how the transistorized ignition module replaces points and the computer's role in EST. Run time is 13 minutes.

TI02103

DISTRIBUTORLESS IGNITION EXPLAINED: WASTE SPARK CONCEPT. Bergwall, [1996].

Note: This video explains how a redesigned multiple coil system uses a waste spark and describes how the reprogrammed ignition module replaces the distributor. Run time is 15 minutes.

TI02104

DISTRIBUTORLESS IGNITION EXPLAINED: TRIGGERING SYSTEMS. Bergwall, [1996].

Note: This video provides a detailed explanation of both DIS and C31 distributorless ignition and explains Hall Effect switch-crank shaft sensors. Run time is 13 minutes.

TI02105

DISTRIBUTORLESS IGNITION EXPLAINED: TROUBLESHOOTING. Bergwall, [1996].

Note: This video explains how to identify and diagnose common distributorless

ignition problems. Run time is 13 minutes.

TI02106

DRIVABILITY TROUBLESHOOTING: THE NO START CONDITION. Bergwall, [1996].

Note: This video demonstrates customer service skills, provides an example diagnostic interview and explains evaluation of cranking text-performance -analysis of compression test. Run time is 14 minutes.

TI02107

DRIVABILITY TROUBLESHOOTING: NO START/NO SPARK. Bergwall, [1996].

Note: This video demonstrates ignition circuit analysis, describes a spark tester and shows using test light to evaluate ignition system triggering pulses. Run time is 14 minutes.

TI02108

DRIVABILITY TROUBLESHOOTING: NO START/NO FUEL. Bergwall, [1996].

Note: This video provides visual inspection of throttle body fuel flow and shows how to distinguish fuel flow problems from electrical problems. Run time is 17 minutes.

TI02109

ADVANCED FUEL INJECTION SYSTEMS: FUEL DELIVERY SYSTEMS. Bergwall, [1994].

Note: This video introduces the evolution of Fuel Injection Systems, explains various systems including PFI, SFI, and CMPFI, describes a returnless fuel system, and introduces Closed-Loop theory. Run time is 22 minutes.

TI02110

ADVANCED FUEL INJECTION SYSTEMS: CLOSED LOOP THEORY. Bergwall, [1994].

Note: This video compares open-loop versus closed-loop operation, details sensor networks, explains catalytic converter control, and introduces heated sensor operation. Run time is 17 minutes.

TI02111

ADVANCED FUEL INJECTION SYSTEMS: CLOSED LOOP DIAGNOSTIC. Bergwall, [1994].

Note: This video features case studies of various models detailing problems such as a failed emission test and diagnostic trouble-code, examines a poor fuel economy, details air pollution, and contaminated sensors. Run time is 17 minutes.

TI02112

ELECTRICITY FOR AUTO TECHNICIANS: WHAT IS ELECTRICITY? Bergwall, [1996].

Note: This video explains conventional and electron theories and describes how electricity works on insulators and conductors. Run time is 16 minutes.

TI02113

ELECTRICITY FOR AUTO TECHNICIANS: MEASURING ELECTRICITY. Bergwall, [1996].
Note: This video shows the importance of understanding what electricity does and presents Ohm's Law. Run time is 15 minutes.

TI02114

ELECTRICITY FOR AUTO TECHNICIANS: ELECTRICITY IN THE CAR. Bergwall, [1996].
Note: This video illustrates the operation of the starting/charging, ignition, lighting and accessories system. Run time is 15 minutes.

TI02116

ELECTRICITY FOR AUTO TECHNICIANS: TEST EQUIPMENT. Bergwall, [1996].
Note: This video demonstrates how to operate common automotive electrical test equipment and explains the various readings. Run time is 16 minutes.

TI02117

ELECTRICITY FOR AUTO TECHNICIANS: ELECTRICAL TROUBLESHOOTING. Bergwall, [1996].
Note: This video demonstrates a diagnostic approach to actual in-car electrical problems and shows how to trace open circuits. Run time 15 minutes.

TI02123

AUTO SUSPENSION EXPLAINED: FRAMES, WHEELS, AND TIRES. Bergwall, [1994].
Note: This video describes full utilized body, stub/utilized frames, introduces radial tire construction, tire sizing and rating, and wheel dimensioning.
Run time is 19 minutes.

TI02124

AUTO SUSPENSION EXPLAINED: SUSPENSION SYSTEMS. Bergwall, [1994].
Note: This video explains the role of springs in a suspension system, features live rear axle, and explains the role of the McPherson struts. Run time is 16 minutes.

TI02125

AUTO SUSPENSION EXPLAINED: STEERING SYSTEMS. Bergwall, [1994].
Note: This video describes understeer-oversteer and neutral steering, introduces steering ratio, and details operation of rack and pinion steering. Run time is 16 minutes.

TI02126

AUTO SUSPENSION EXPLAINED: STEERING ANGLES. Bergwall, [1994].
Note: This video explains centerline and vertical reference line, introduces the various steering angles, explains positive/negative scrub radius, and describes common alignment problems. Run time is 15 minutes.

TI02127

AUTOMOTIVE AIR CONDITIONING SYSTEMS EXPLAINED: AIR CONDITIONING PRINCIPLES. Bergwall, [1995].

Note: This video defines differences between heat and temperature, and explains refrigeration pressure and temperature, heat transfer, and the refrigeration cycle. Run time is 19 minutes.

TI02128

AUTOMOTIVE AIR CONDITIONING SYSTEMS EXPLAINED: SYSTEM COMPONENTS. Bergwall, [1995].

Note: This video describes compressors, explains the difference between the accumulators and receiver driers, and details the operation of the thermal expansion valve and orifice tube.

TI02129

AUTOMOTIVE AIR CONDITIONING SYSTEMS EXPLAINED: SYSTEM CONTROLS. Bergwall, [1995].

Note: This video introduces manual and electronic climate controls, and examines the role of pressure cycling switches, thermostatic switches and high and low pressure cutoff switches. Run time is 19 minutes.

TI02130

AUTOMOTIVE AIR CONDITIONING SYSTEMS EXPLAINED: SYSTEM SERVICING. Bergwall,

Note: This video introduces the Federal Clean Air Act, demonstrates the charging station and manifold gauge set, examines evacuation, recovery and re-charging, and shows the procedures used in leak testing. Run time is 24 minutes. 1995

TI02131

ANTI-LOCK BRAKE SYSTEMS EXPLAINED: THEORY AND OPERATION. Bergwall, [1996]

Note: This video introduces the operation of Anti-lock Brake Systems and explains the various components of this system. Run time is 15 minutes.

TI02132

ANTI-LOCK BRAKE SYSTEMS EXPLAINED: HOW AUTOMOTIVE BRAKES WORK. Bergwall, [1996]. Note: This video explains different braking systems, and drum and disk brakes and details fluid circuits. Run time is 15 minutes.

TI02133

ANTI-LOCK BRAKE SYSTEMS EXPLAINED: SERVICE AND TROUBLESHOOTING. Bergwall, [1996]. Note: This video describes step-by-step troubleshooting techniques and the essential tools needed for proper service. Run time is 13 minutes.

TI02134

ANTILOCK BRAKES SYSTEMS EXPLAINED: DIAGNOSIS AND REPAIR OF DRUM BRAKES.

Bergwall, [1996]. Note: This video explains operation of drum brakes with computerized graphics and introduces diagnostic procedure.

TI02135

ANTILOCK BRAKE SYSTEMS EXPLAINED: DIAGNOSIS AND REPAIR OF DISC BRAKES.

Bergwall, [1996]. Note: This video explains operation of disc brakes with computerized graphics and introduces diagnostic procedure.

TI02136

OBD II EXPLAINED: CHANGES UNDER OBD II. BERGWALL, [1998].

Note: The video helps the student understand why OBD II regulations came about.

It identifies the major features of OBD II and how it differs from OBD I.

Run time is 20 minutes.

TI02137

OBD II EXPLAINED: OBD II MONITORS. BERGWALL, [1998].

Note: This video identifies all of the monitors and helps the student understand how the OBD II monitors work. It also helps the student understand how the MIL and DTCS function under OBD II. Run time is 20 minutes.

TI02138

OBD II EXPLAINED: TROUBLESHOOTING. BERGWALL, [1998].

Note: This video helps the students understand how DTCS can help. Other points covered are how/when to perform the OBD II drive cycle, how freeze-frames can help and to understand the importance of verifying the customer's concern, even with OBD II cars. Run time is 20 minutes.

TI02139

ELECTRONICS FOR AUTO TECHNICIANS. Bergwall, [1998].

Note: This interactive CD Rom walks students through the automotive electronics system of cars. It also provides a brief introductory video, tests, glossary, and a teacher's gradebook. 1998.

TI02140

ADVANCED FUEL INJECTION SYSTEMS. Bergwall, [1998].

Note: This interactive CD Rom walks students through the fuel injection system of cars. It also provides a brief introductory video, tests, glossary, and a teacher's gradebook. 1998.

TI02141

AUTOMOTIVE SAFETY SYSTEMS EXPLAINED. Bergwall, [1998].

Note: This interactive CD Rom walks students through the safety systems of cars.

It provides a brief also introductory video, tests, glossary, and a teacher's gradebook. 1998.

TI02142

BASIC AUTOMOTIVE JOBS. Bergwall, [1998].

Note: This interactive CD Rom walks students through basic repair and maintenance of a vehicle. It also provides a brief introductory video, tests, glossary, and a teacher's gradebook.

TI02143

AUTOMOTIVE ENGINE OVERHAUL. Bergwall, [1998].

Note: This interactive CD Rom walks students step by step through overhauling an automotive engine. It also provides a brief introductory video, tests, glossary, and a teacher's gradebook. 1998.

TI02144

AUTO EMISSIONS EXPLAINED. Bergwall, [1998].

Note: This interactive CD Rom walks students through the basics of auto emission troubleshooting and repair. It also provides an introductory video, tests, glossary, and a teacher's gradebook.

TI02145

AUTOMOTIVE AIR CONDITIONING SYSTEMS EXPLAINED. Bergwall, [1998].

Note: This interactive CD Rom walks students through the basics of automotive air conditioning troubleshooting and repairing. It also provides a brief introductory video, tests, glossary, and a teacher's gradebook. 1998.

TI02146

AUTOMOTIVE SUSPENSION SYSTEMS. Bergwall, [1998].

Note: This interactive CD Rom walks students through the basics of troubleshooting and repairing automotive suspension systems. It also provides an introductory video, tests, glossary, and a teacher's gradebook. 1998.

TI02147

ANTILOCK BRAKE SYSTEMS. Thomson Learning, [2001].

Note: This interactive CD Rom walks students through the basics of troubleshooting and repairing anti-lock brake systems. It also provides an introductory video, tests, glossary, and a teacher's gradebook. 2001.

TI02148

VA BEACH AUTOMOTIVE YOUTH EDUCATION SYSTEM. Daimler Chrysler, [1999].

Note: This program discusses the Automotive Youth Education System (AYES), and how this system gets students involved in technical education and on-the-job training in the automotive industry. It also speaks about the need for individuals in the automotive industry. Run time is 8 minutes. 1999.

TI02149

FAST TRACK TO YOUR FUTURE.

Note: This video provides information to students who are interested in joining the automotive industry. Run time is approximately 11 minutes.

TI02150

INTRODUCING CAREER OPPORTUNITIES IN THE AUTOMOTIVE SERVICE INDUSTRY. NATEF.

Note: This video is a presentation of career opportunities in the automotive service industry. The program is sponsored by the National Automotive Technicians Education Foundation (NATEF) and the National Institute for Automotive Service Excellence (ASE). Although the primary audiences are current and prospective automotive students, the program is an excellent educational tool for introducing anyone to today's activities related to alternative fuel vehicles (AFVs). The program illustrates the driving forces behind the growing numbers of AFVs being used everyday and where career opportunities can be found. The program moderator takes the audience around the country, visiting many of the premier AFV users, conversion companies, training programs, and industry events that support and promote the use of AFVs. Run time is 29 minutes.

TI02151 DIESEL PREVENTIVE MAINTENANCE: LUBRICATING SYSTEM. Bergwall, [1996]. Note: This video explains the importance of oil levels and how to check for external leaks, highlights oil change, and presents pressure checks and vehicle instrumentation check. Run time is 19 minutes.

TI02152
DIESEL PREVENTIVE MAINTENANCE: FUEL SYSTEM. Bergwall, [1996].
Note: This video presents methods of ongoing care for diesel fuel systems and details checks for fuel tank, filter changing, water separators and fuel pumps. Run time is 26 minutes.

TI02153
DIESEL PREVENTIVE MAINTENANCE: ELECTRICAL SYSTEM. Bergwall, [1996].
Note: This video explains battery care, specific gravity checks, shows how to test battery cables, and stresses safety. Run time is 24 minutes.

TI02154
DIESEL PREVENTIVE MAINTENANCE: AIR SYSTEM. Bergwall, [1996].
Note: This video surveys proper procedures for ongoing care of a diesel air system, lists steps for crank case breathers, and details service of oil bath air cleaners. Run time is 21 minutes.

TI02155
DIESEL PREVENTIVE MAINTENANCE: COOLING SYSTEM. Bergwall, [1996].
Note: This video shows how to check coolant levels, water pump and thermostat, investigates fans, belts, gauges, and discusses heat dissipation. Run time is 23 minutes.

TI02158
LOCK OUT/TAG OUT. BERGWALL, [1996].
Note: This video explains the lock out and tag out procedure and details dangers of unexpected startup of machinery and equipment. Run time is 14 minutes.

TI02159

AUTOCAD RELEASE 14: NAVIGATING THE R14 INTERFACE. BERGWALL, [1996].

Note: This video explains how to use the R14 graphics user interface - dialog boxes, toolbars and menus. It shows how to utilize new common editing features and illustrates the scan tools ability to control or override the computer. Run time is 60 minutes. 1996.

TI02160

AUTOCAD RELEASE R14: R14 COMMAND UPDATES 1. BERGWALL, [1996].

Note: This video shows the new object snap features, details how to utilize new direct distance entry and tracking capabilities, and explains R14's real time pan and zoom. Run time is 60 minutes. 1996.

TI02161

AUTOCAD RELEASE 14: R14 COMMAND UPDATES II. BERGWALL, [1996].

Note: This video describes various ways to control object properties, explores R14's improved mtext capabilities, and examines new plot enhancements. Run time is 60 minutes. 1996.

TI02162

AUTOCAD RELEASE 14: SHARING YOUR WORK WITH OTHERS. BERGWALL, [1996].

Note: This video explains the xref manager, shows how to use Window's object linking and embedding features, and explores how to insert internet images into autocad. Run time is 60 minutes. 1996.

TI02164

AUTOCAD RELEASE 14--DRAW COMMAND. BERGWALL, [1995].

Note: This video describes line, coordinate entry, discusses OSNAP (Object Snaps), arc polygon, pline, bhatch, an ellipse. Run time is 90 minutes.

TI02165

AUTOCAD RELEASE 14: DISPLAY AND INQUIRY. BERGWALL, [1995].

Note: This video discusses basics, regen-redraw, zoom commands, discusses dsvviewer, and pan and view side files. Run time is 90 minutes.

TI02166

AUTOCAD RELEASE 14: MODIFYING DRAWINGS. BERGWALL, [1995].

Note: This video discusses edit basics and selection sets, discusses grips, changing properties, scale and rotate, chamfer, divide and measure, and nested blocks. Run time is 90 minutes.

TI02167

AUTOCAD RELEASE 14: RELEASE 14 CONSTRUCTION TECHNIQUES. BERGWALL, [1995].

Note: This video discusses undo, move and copy, offset, mirror, array, fillet, divide and measure and explode. Run time is 90 minutes.

TI02168

AUTOCAD RELEASE 14: ANNOTATING DRAWINGS. BERGWALL, [1995].

Note: This video discusses annotation basics, associative dimensions, linear commands, limangular, radial dimensions, dimordinate, style, font support, and labelling drawings. Run time is 90 minutes.

TI02169

AUTOCAD RELEASE 14: DATA EXCHANGE AND OUTPUT. BERGWALL, [1995].

Note: This video discusses data exchange, copy commands, block, insert, xref, plot and paper space. Run time is 90 minutes.

TI02170

AUTOMOTIVE TECHNOLOGY CURRICULUM: MODULE 1 INTRODUCTION TO AUTOMOTIVE TECHNOLOGY. Instructional Materials Laboratory, [1996].

Note: The 1996 revision of Introduction to Automotive Technology is the first of nine modules to make up the Automotive Technology Curriculum Guide. All modules in the guide are based on the Auto Mechanics Technology Competency Profile, which in turn is based on and cross-referenced to the ASE task list. For years ASE has set the professional standards for automotive technicians. Therefore, a strong ASE orientation makes the guide an effective tool for preparing students to enter the technological advanced field of automotive technology. After completing this unit, the student will be able to identify chemicals commonly used in the automotive shop as well as safety precautions for using these chemicals. 1996.

TI02171

AUTOMOTIVE TECHNOLOGY CURRICULUM: MODULE 2 - ELECTRICAL SYSTEMS.

Instructional Materials Laboratory, [2000].

Note: The 2000 revision of Electrical Systems represents the Instructional Materials Laboratory's commitment to the continual improvement of the Automotive Technology Curriculum. All nine modules are based on the Automotive Technology Competency Profile that is cross-referenced to the NATEF (ASE) task list. A strong NATEF (ASE) orientation makes the nine curriculum guides an effective tool for preparing students to enter the technologically advanced field of automotive technology. 2000.

TI02172

AUTOMOTIVE TECHNOLOGY CURRICULUM: MODULE 3 ENGINE PERFORMANCE - SECTION A: IGNITION SYSTEMS. Instructional Materials Laboratory, [1999].

Note: The 1999 revision of Engine Performance - Ignition Systems, represents the Instructional Materials Laboratory's commitment to the continual improvement of the Automotive Technology Competency Profile that is cross-referenced to the ASE task list. A strong ASE orientation makes the nine curriculum guides an effective tool for preparing students to enter the technologically advanced field of automotive technology. After completing this unit, the student should be able to identify the basic ignition

systems. 1999.

TIO2173

AUTOMOTIVE TECHNOLOGY CURRICULUM MODULE 3: ENGINE PERFORMANCE - SECTION B: FUEL AND EXHAUST SYSTEMS. Instructional Materials Laboratory, [2000].

Note: The 2000 revision of Engine Performance - Fuel and Exhaust Systems, represents the Instructional Materials Laboratory's commitment to the continual improvement of the Automotive Technology Curriculum. A strong NATEF (ASE) orientation makes the nine curriculum guides an effective tool for preparing students to enter the technologically-advanced field of automotive technology. After completing this unit, the student should be able to identify the various types of fuel and fuel specifications. 2000.

TIO2174

AUTOMOTIVE TECHNOLOGY CURRICULUM: MODULE 3 ENGINE PERFORMANCE - SECTION C: EMISSION CONTROL SYSTEMS. Instructional Materials Laboratory, [2001].

Note: The 2001 revision of Engine Performance - Emission Control Systems, represents the Instructional Materials Laboratory's commitment to the continual improvement of the Automotive Technology Curriculum. A strong NATEF (ASE) orientation makes the nine curriculum guides an effective tool for preparing students to enter the technologically-advanced field of automotive technology. After completing this unit, the student should be able to identify the types of emissions and air pollution caused by vehicles. 2001.

TIO2175

AUTOMOTIVE TECHNOLOGY CURRICULUM: MODULE 4 - ENGINE REPAIR. Instructional Materials Laboratory, [1998].

Note: The 1996 revision of Introduction to Automotive Technology is the first of nine modules to make up the Automotive Technology Curriculum Guide. After completing this unit, the student should be able to identify the parts and operation of an internal combustion engine. 1998.

TIO2176

AUTOMOTIVE TECHNOLOGY CURRICULUM: MODULE 5 - STEERING AND SUSPENSION SYSTEMS. Instructional Materials Laboratory, [1998].

Note: The 1996 revision of Introduction to Automotive Technology is the first of nine modules to make up the Automotive Technology Curriculum Guide. After completing this unit, the student should be able to identify the components and operating principles of different types of steering systems. 1998.

TIO2177

AUTOMOTIVE TECHNOLOGY CURRICULUM: MODULE 6 - BRAKES. Instructional Materials Laboratory, [1998].

Note: The 1996 revision of Introduction to Automotive Technology is the first of

nine modules to make up the Automotive Technology Curriculum Guide. After completing this unit, the student should be able to identify the basic principles by which an automotive braking system functions. 1998.

TI02178

AUTOMOTIVE TECHNOLOGY CURRICULUM: MANUAL DRIVE TRAIN AND AXLES. Instructional Materials Laboratory, [1998].

Note: The 1996 revision of Introduction to Automotive Technology is the first of nine modules to make up the Automotive Technology Curriculum Guide. After completing this unit, the student should be able to identify basic characteristics of manual drive train and axle design. 1998.

TI02180

AUTOMOTIVE TECHNOLOGY CURRICULUM: MODULE 9 - HEATING AND AIR CONDITIONING. Instructional Materials Laboratory, [1998].

Note: The 1998 revision of Heating and Air Conditioning is the ninth of nine modules to make up the Automotive Technology Curriculum Guide. After completing this unit, the student should be able to identify the principles of automotive air conditioning. 1998.

TI02181

TWO-STROKE ENGINE OPERATION. Shopware, [1998].

Note: This video recaps the operation of the four-stroke engine, introduces the mechanics of the two-stroke engine, and explains the differences in their components. It illustrates how gas and oil are added differently to the two types of engines and also stresses the importance of using your manual. 1998.

TI02182

TWO-STROKE ENGINE ASSEMBLY. Shopware, [1998].

Note: The systematic procedure of assembly is demonstrated on a Rotax Elan two-stroke engine including: replacing the cylinder; replacing the cylinder head; replacing the inner shroud; replacing the flywheel; replacing the outer shroud and recoil; replacing the carburetor; and replacing and gapping the spark plug. 1998.

TI02183

TWO-STROKE ENGINE DISASSEMBLY. Shopware, [1998].

Note: The systematic procedure of disassembly is demonstrated on a Rotax Elan two-stroke engine, including: draining the fuel; removing the flywheel with a flywheel puller; removing the cylinder head; and removing the cylinder itself. The piston is not removed, but the pin, rings and skirt are pointed out, as well as the connecting rod. 1998.

TI02184

TWO-CYCLE ENGINE TROUBLESHOOTING. Shopware, [1998].

Note: Marquette illustrates the method of locating problems in the fuel system of an outboard motor, including: checking the gauge, ignition system, and compression. He also offers advice on repairing typical problems. 1998.

TI02186

HOW CARS WORK: A VIDEO MANUAL - THE COOLING SYSTEM.

Note: This series shows beginning automotive students some of the components and major assemblies of each, the relationship between the parts and the results when one component fails. It covers the cooling system, electrical system, brake system and emission control system. This set includes four videos and run time is 60 minutes.

TI03033

MEASURING TOOLS EXPLAINED: PART 4 DEPTH GAUGES. [01/01/96].

Note: Part four of this six tape series features depth gauges.

TI03034

MEASURING TOOLS EXPLAINED: PART 5 DIAL INDICATORS. [01/01/96].

Note: Part five of this six tape series features dial indicators.

TI03035

MEASURING TOOLS EXPLAINED: PART 6 PROTRACTORS AND JO BLOCKS. [01/01/96].

Note: Part six of this six tape series features protractors and jo blocks.

TI03036

CHILDRENS PLAYSETS. [01/01/94].

Note: This "how-to" video includes the following: designing a playset utilizing the necessary safety considerations; constructing a sturdy frame embedded securely in the ground; selecting the best materials for long lasting exterior use; and selecting the appropriate playset equipment for your use. An instructor's guide is included. Run time is 60 minutes.

TI03037

SIDING. [01/01/94].

Note: This "how-to" video includes: tearing off old siding and preparing or replacing existing sheathing for new siding; estimating material requirements; applying house wrap for weatherizing; using traditional hand tools, power tools and pneumatic equipment; installing siding for professional looking results; and safely dealing with heights using extension ladders, and ladder jacks with planks. An instructor's guide is included. Run time is 40 minutes.

TI03038

BATHROOMS: PLANNING AND INSTALLATION. [01/01/94].

Note: This "how-to" video includes: designing a bathroom and selecting products; tearing out old elements; framing new elements; roughing-in mechanical systems; installing drywall, cabinets and countertops, ceramic tile and vinyl, plumbing fixtures; and updating the bathroom with a "facelift". An instructor's guide is included. Run time is 60 minutes.

TI03039

KITCHENS: PLANNING AND INSTALLATION. [01/01/94].

Note: This "how-to" video includes: planning your kitchen; tearing out old elements; framing new elements; installing cabinets, countertops, flooring, plumbing fixtures and appliances, and lighting; and refacing cabinets. An instructor's guide is included. Run time is 60 minutes.

TI03042

FINISH CARPENTRY: INSTALLATION AND FINISHING. Hometime, [1994].

Note: You can DO-IT-YOURSELF with help from Dean Johnson, home improvement expert, and host of the "Hometime" TV series. Let Dean show you the techniques you need to do a professional job. You'll learn how to choose the right tools, save on materials, avoid costly mistakes... and complete your project on schedule. It's the fast-paced entertaining way to DO-IT-YOURSELF...and DO-IT-RIGHT. Run time is 45 minutes. 1994.

TI03043

CONTRACTING A HOME TAPE 1 OF 2. Hometime.

Note: This program presents the whole residential construction process. Volume 1 covers the planning of a new home and takes you through framing and the mechanical rough insurance as well as working with an architect, customizing a design, choosing a site, choosing, hiring, and scheduling subcontractors, supervising excavation/foundation construction, and coordinating heating, plumbing, and electrical rough insurance. Volume 2 covers the interior and exterior finishing: roofing, windows, doors, siding and brick, scheduling insulation and drywall contractors, coordinating flooring, tiling, cabinets, countertops, finishing carpentry materials, painting, final trim outs, exterior finishing and calculating final costs. Run time is 179 minutes (2-tape set).

TI03044

CONTRACTING A HOME TAPE 2 OF 2. Hometime.

Note: This program presents the whole residential construction process. Volume 1 covers the planning of a new home and takes you through framing and the mechanical rough insurance as well as working with an architect, customizing a design, choosing a site, choosing, hiring, and scheduling subcontractors, supervising excavation/foundation construction, and coordinating heating, plumbing, and electrical rough insurance. Volume 2 covers the interior and exterior finishing: roofing, windows, doors, siding and brick, scheduling insulation and drywall contractors, coordinating flooring, tiling, cabinets, countertops, finishing carpentry materials, painting, final trim outs, exterior finishing and calculating final costs. Run time is 179 minutes (2-tape set).

TI03045

NOTHING BUT HEAVY DUTY MILWAUKEE: TRAINING MATERIALS FOR POWER TOOL USERS AND INSTRUCTORS. Milwaukee Electric Tool Corporation, [2001].

Note: This tool fundamentals kit includes tips on both tools and accessories to help your students work more efficiently and safely. This kit includes: a

tool fundamental manual, a safety video, a safety poster, a Milwaukee full line catalog and mini-catalog, a tools of the trade magazine and 25 copies of our Heavy Duty Club newsletter. 2001.

TI03046

CONSTRUCTION SYSTEMS TECHNOLOGY: DETERMINING RESOURCES. Bergwall, [1996].

Note: This video introduces the seven basic types of resources, identifies employment opportunities and explores natural and industrial materials. Run time is 20 minutes.

TI03047

CONSTRUCTION SYSTEMS TECHNOLOGY: BUILDING THE STRUCTURE. Bergwall, [1996].

Note: This video outlines the initial stages, examines structural foundations, explores framing, and details joists. Run time is 20 minutes.

TI03048

CONSTRUCTION SYSTEMS TECHNOLOGY: FINISHING THE STRUCTURE. Bergwall, [1996].

Note: This video details electrical and plumbing procedures, explores heating and cooling systems, describes methods for installing drywall, and lists types of door and windows. Run time is 19 minutes.

TI03049

CONSTRUCTION SYSTEMS TECHNOLOGY: OUTPUTS AND FEEDBACKS. Bergwall, [1996].

Note: This video describes the importance of monitoring construction processes, and presents the importance of plans, drawings, building codes and regulations. Run time is 20 minutes.

TI03058

1998 NCCER CAREERS IN CONSTRUCTION: BUILD YOUR FUTURE.

Note: One of the keys to addressing the industry workforce shortage lies in improving the industry's image among young people. Exploring Careers in Construction was written to help middle school and high school students discover the world of opportunity in construction and maintenance. This practical guide includes an industry overview, what to expect on the job and specific career opportunities.

TI03062

BASIC SCAFFOLDING: SAFETY AND ASSEMBLY. CEV Multimedia, [2000].

Note: Scaffolding safety procedures are addressed as students assemble a two-tiered scaffold. A scaffolding professional, with over 30 years experience in the construction industry, takes viewers through the step-by-step process of constructing a scaffold. Although many types of scaffolds exist, the VideoActive presentation details the set-up, dismantling and elements of a standard scaffold. A final checklist ensures the correct and safe way to construct a scaffold. Run time is 26 minutes. 2000.

TI03063

RESIDENTIAL CARPENTRY: WALL FRAMING. Meridian, [1998].

Note: Whether working with floor, wall, ceiling or roof framing, viewers get a 1st hand look at construction procedures, safety issues and proper tools. A clear explanation of each step provides in-depth information while viewers watch actual carpenters to the work. Run time is 12 minutes. 1998

TI03064

RESIDENTIAL CARPENTRY: ROOF FRAMING. Meridian, [1998].

Note: Whether working with floor, wall, ceiling or roof framing, viewers get a 1st hand look at construction procedures, safety issues and proper tools. A clear explanation of each step provides in-depth information while viewers watch actual carpenters to the work. Run time is 9 minutes. 1998.

TI03065

RESIDENTIAL CARPENTRY: FLOOR FRAMING. Meridian, [1998].

Note: Whether working with floor, wall, ceiling or roof framing, viewers get a 1st hand look at construction procedures, safety issues and proper tools. A clear explanation of each step provides in-depth information while viewers watch actual carpenters to the work. Run time is 10 minutes. 1998.

TI03066

RESIDENTIAL CARPENTRY: CEILING FRAMING. Meridian, [1998].

Note: Whether working with floor, wall, ceiling or roof framing, viewers get a 1st hand look at construction procedures, safety issues and proper tools. A clear explanation of each step provides in-depth information while viewers watch actual carpenters to the work. Run time is 8 minutes. 1998.

TI03067

ESTIMATING BUILDING MATERIALS FOR HOME CONSTRUCTION. Cambridge Educational, [2002].

Note: This program presents rule-of-thumb techniques of estimating material needs for a deck system, exterior walls, interior walls, roofing, electrical systems, and plumbing systems. Basing the project on plans for a three-bedroom house, the video uses sophisticated computer animation to help clearly visualize the estimating process. The program shows how to calculate square and linear footage; estimate amounts of sheeting, drywall, and siding; determine numbers of joists, studs, and beams; and assess wiring and plumbing needs. Easy-to-use formulas presented in a concise format make this video a great teaching aid for the very first step in construction work. Run time is 26 minutes. 2002.

TI03068

INTRODUCTION TO CONSTRUCTION TECHNOLOGY. Meridian Education Corporation.

Note: This program covers basic information on construction technology including a definition of construction, the project design, types of construction, the involvement of architects in the construction process, zoning laws, building

codes, local covenants, site preparation, substructure and superstructure, building materials, installation of utilities, enclosing, and finishing. Run time is 17 minutes.

TIO3069

ENCLOSING, FINISHING, AND LANDSCAPING STRUCTURES. Meridian Education Corporation.

Note: This program discusses enclosing, finishing, and landscaping of structures; including reasons for enclosing and finishing (protection, comfort, convenience), elements of enclosing, finishing and landscaping: enclosing the exterior, finishing the exterior, enclosing the exterior, finishing the interior, installing accessories including electrical and plumbing fixtures and appliances, cabinets, countertops, etc., construction of pathways, and installing landscaping. Run time is 18 minutes.

TIO3070

ERECTING SUB AND SUPERSTRUCTURES. Meridian Education Corporation.

Note: This program covers the erecting of structures, including very detailed information on substructures (slab, spread, and pile foundations) and superstructures (sills, headers, joists, studs, roofs). Also contains a brief discussion of some alternative superstructures including examples of tensil structures and pneumatic structures. Run time is 19 minutes.

TIO3071

INSTALLING UTILITIES. Meridian Education Corporation.

Note: This program details the installation of utilities of all types: electrical communications, water, sewage and natural gas. The process of installation for each type of utility is covered in depth, including the workers who perform the tasks, the specific tasks themselves, materials and components used, as well as an explanation of how the utilities operate, and the finishing stages of installation for each. A brief discussion of automated control (Smart House) systems is included. Run 20 minutes.

TIO3072

PROJECT DESIGN AND SITE PREPARATION. Meridian Education Corporation.

Note: This program includes the duties of architects and engineers (design, construction of materials and methods, choice, overseeing projects), elements of construction design, client's needs, developing rough designs, selecting the best design, refining the design, client presentation and approval, and elements of site preparation (removal of unnecessary objects, leveling the site, locating where the structure will go. Run time is 17 minutes.

TIO3073

CAREERS IN CONSTRUCTION - HVAC. National Center for Construction Education and Research, [2001]. Note: This video describes the craft, craftperson, career path and earning

potential for the HVAC career. Run time is 6 to 8 minutes. 2001.

TI03074

CAREERS IN CONSTRUCTION: WELDING. National Center for Construction Education and Research, [2001].

Note: This video describes the craft, craftperson, career path, and earning potential for a welding career. Run time is 6 to 8 minutes. 2001.

TI03075

CAREERS IN CONSTRUCTION: ELECTRICAL. National Center for Construction Educational and Research, [2001].

Note: This video describes the craft, craftperson, career path, and earning potential for an electrical career. Run time is 6 to 8 minutes. 2001.

TI03076

CAREERS IN CONSTRUCTION: HEAVY EQUIPMENT. National Center for Construction Education and Research, [2001]. Note: This video describes the craft, craftperson, career path, and earning potential for a career in heavy equipment. Run time is 6 to 8 minutes. 2001.

TI03077

CAREERS IN CONSTRUCTION: CARPENTRY. National Center for Construction Education and Research, [2001]. Note: This video describes the craft, craftperson, career path, and earning potential for a career in carpentry. Run time is 6 to 8 minutes. 2001.

TI03078

CAREERS IN CONSTRUCTION: PAINTING. National Center for Construction Education and Research, [2001]. Note: This video describes the craft, craftperson, career path, and earning potential for a career in painting. Run time is 6 to 8 minutes. 2001.

TI03079

BROADEN YOUR HORIZONS...CAREERS IN CONSTRUCTION. National Center for Construction Education and Research, [2001].

Note: Build Your Future 2001 is an entertaining and informative look at the construction industry, one of America's largest employees. This program allows the viewer to experience firsthand the exciting and challenging profession of the craft professional and construction manager. This video features interviews with craft professionals, construction managers, and company owners at construction companies and job sites across the country. Run time of 29:22 minutes.

TI04000

THE APPLIED VOCATIONAL MATH SERIES: ELECTRONICS.

Note: This video introduces a high demand career area describing what the typical jobs are and the types of skills in demand. The video then highlights why math is important to that particular career area. Run time is 25 minutes.

TI04001

ELECTRICAL WIRING RESIDENTIAL. Delmar Thomson Learning, [1998].

Note: The program provides a complete electronic textbook on residential wiring with links to the electronic version of the 1999 National Electronic Code.

It also includes: 1) revolutionary new CD-ROM links to a detailed guide to all aspects of residential wiring to the complete 1999 National Electrical Code. It covers everything from wiring a lighting branch circuit, to installing a digital satellite system. Examples are: wiring diagrams, photos and illustrations explain all the new 1999 NEC requirements thoroughly. Each of the hundreds of references to the 1999 National Electrical Code is only a mouse click away from that section of the code. 2) Room-by-room explanations of how to wire a typical house according to the NEC. 3) More than 1200 references to the NEC are easy to access with the click of a mouse. 4) Assignments that can be printed and completed by student. 5) Approximately 650 figures. 6) Entire text of the 1999 National Electrical Code. 1998.

TI04002

WORKING SAFELY WITH ELECTRICITY: ELECTRICITY CAN KILL. Bergwall, [1996].

Note: This video reviews the fundamental principles of electricity and details what happens when electricity runs through the body. Run time is 18 minutes.

TI04003

WORKING SAFELY WITH ELECTRICITY: THE SHOCK EMERGENCY. Bergwall, [1996].

Note: This video describes appropriate dress for working with electricity and explains the dangers of common practices. Run time is 18 minutes.

TI04004

WORKING SAFELY WITH ELECTRICITY: THE IMPORTANCE OF GROUNDING. Bergwall, [1996].

Note: This video details what grounding is and why it is a vital safety feature. Run time is 15 minutes.

TI04005

WORKING SAFELY WITH ELECTRICITY: EMERGENCY RESPONSE. Bergwall, [1996].

Note: This video describes how to respond when someone receives an electrical shock and also examines different types of fire extinguishers and how they should be used. Run time is 16 minutes.

TI04006

BASIC ELECTRICITY: DC CURRENTS - SERIES CIRCUIT ANALYSIS. Bergwall, [1996].

Note: This video explains how to determine voltage at various points and shows schematic diagrams. Run time is 20 minutes.

TI04007

BASIC ELECTRICITY: DC CURRENTS: PARALLEL CIRCUITS. Bergwall, [1996].

Note: This video details the relationship between voltage, current, resistance, and power and compares schematics for parallel circuits using a breadboard. Run time is 24 minutes.

TIO4008

BASIC ELECTRICITY: DC CURRENTS - SERIES/PARALLEL CIRCUITS. Bergwall, [1996].

Note: This video details the use of a schematic diagram and describes how to break down a complex schematic. Run time is 18 minutes.

TIO4009

INTRODUCTION TO RESIDENTIAL WIRING: NATIONAL ELECTRICAL CODE. Bergwall, [1996].

Note: This video explains building inspections, service inspections, introduces symbology and stresses safety in clothing and work habits. Run time is 17 minutes.

TIO4010

INTRODUCTION TO RESIDENTIAL WIRING: INSTALLING THE ELECTRICAL SERVICE. Bergwall, [1996].

Note: This video highlights planning locations and introduces electrical circuits and explains installation. Run time is 20 minutes.

TIO4011

RESIDENTIAL WIRING: INSTALLING SWITCHED CIRCUITS. Bergwall, [1996].

Note: This video details circuit concepts, explains switch types and shows rough-in switched circuits. Run time is 24 minutes.

TIO4012

DIRECT CURRENT: ELECTRON FLOW. BERGWALL, [1996].

Note: This video introduces the basic concepts of electricity and electron theory, explains basic formulas and introduces Ohm's law. Run time is 15 minutes.

TIO4013

DIRECT CURRENT: SYMBOLS, DIAGRAMS & CIRCUITS. BERGWALL, [1996].

Note: This video explains symbols and pictorials, describes how a battery works, and demonstrates proper cutting and stripping techniques. Runs 13 minutes.

TIO4014

DIRECT CURRENT: OHM'S LAW IN ACTION. BERGWALL, [1996].

Note: This video introduces watt, current, voltage, and resistance, and compares circuits with varying resistance and voltage. Run time is 14 minutes.

TIO4015

OPERATIONAL AMPLIFIERS EXPLAINED: GENERAL AMPLIFIER CONCEPTS. BERGWALL, [1996].

Note: This video introduces universal amplifiers, describes amplifier

specifications and demonstrates effects in actual amplifier circuits. Run time is 16 minutes.

TIO4016

OPERATIONAL AMPLIFIERS EXPLAINED: ARCHITECTURE, PACKAGING AND CHARACTERISTICS. BERGWALL, [1996].

Note: This video explores Op-amp internal functional blocks, demonstrates circuits used to construct blocks, and describes op-amp symbols. Run time is 17 minutes.

TIO4017

OPERATIONAL AMPLIFIERS EXPLAINED: NEGATIVE FEEDBACK AND THE INVERTING AMPLIFIER. BERGWALL, [1996]. Note: This video defines comparators, describes negative feedback and its effects and examines actual circuit-inverting amplifier circuit and summing amp. Run time is 20 minutes.

TIO4018

OPERATIONAL AMPLIFIERS EXPLAINED: THE NON-INVERTING AMPLIFIER. BERGWALL, [1996].

Note: This video introduces non-inverting amplifiers and delineates actual application. Run time is 17 minutes.

TIO4019

SEMICONDUCTORS EXPLAINED: BASIS THEORY. BERGWALL, [1996].

Note: This video introduces the fundamentals of semiconductor physics, presents basic materials, and introduces silicon. Run time is 21 minutes.

TIO4020

SEMICONDUCTORS EXPLAINED: DIODE OPERATION. BERGWALL, [1996].

Note: This video explains formation of diode-pn junction, defines forward -reverse bias, and introduces significant specifications and ratings of the diode. Run time is 21 minutes.

TIO4021

SEMICONDUCTORS EXPLAINED: DIODE APPLICATION. BERGWALL, [1996].

Note: This video compares ordinary junction diode with several special types, examines zener diode, and introduces varistor diodes. Run time is 21 minutes.

TIO4022

SEMICONDUCTORS EXPLAINED: TRANSISTORS & ICs. BERGWALL, [1996].

Note: This video presents the fundamentals of bipolar transistors and details operation of npn devices. Run time is 22 minutes.

TIO4023

UNDERSTANDING DIGITAL ELECTRONICS: AND GATES. BERGWALL, [1996].

Note: This video examines the and function with simple switching network,

develops a truth table and distinguishes between logic symbol and a Boolean expression. Run time is 21 minutes.

TIO4024

UNDERSTANDING DIGITAL ELECTRONICS: OR GATE/NOT GATES. BERGWALL, [1996].

Note: This video explores or and not functions from switching networks and presents logic symbols and Boolean expressions. Run time is 11 minutes.

TIO4025

UNDERSTANDING DIGITAL ELECTRONICS: NAND GATES/NOR GATES. BERGWALL, [1996].

Note: This video compares nand and nor functions to and-not and or-not circuits, also examines pin-out and schematic diagrams and uses actual chips to wire circuits from diagrams. Run time is 13 minutes.

TIO4026

UNDERSTANDING DIGITAL ELECTRONICS: XOR GATES/XNOR GATES. BERGWALL, [1996].

Note: This video develops xor and xnor functions from combinations of primary logic gates and experiments with wiring xor and xnor gates using actual integrated circuits. Run time is 16 minutes.

TIO4031

ALTERNATING CURRENT FUNDAMENTALS: MAGNETISM AND ELECTROMAGNETISM. BERGWALL, [1996].

Note: This video introduces the major categories of AC usage for electrical power, presents properties of magnets and shows how magnetic principles apply to solenoids. Run time is 26 minutes.

TIO4032

ALTERNATING CURRENT FUNDAMENTALS: ELECTRICAL GENERATORS AND MOTORS. BERGWALL, [1996].

Note: This video compares AC and DC principles, introduces how electricity is generated and examines parts of a simple generator. Run time is 26 minutes.

TIO4033

ALTERNATING CURRENT FUNDAMENTALS: MEASURING AC. BERGWALL, [1996]

Note: This video discusses ways of producing AC, construction of AC waveform, introduces sine wave terminology and demonstrates oscilloscope measurements. Run time is 25 minutes.

TIO4035

ALTERNATING CURRENT FUNDAMENTALS: REACTANCE AND ELECTRICAL POWER. BERGWALL, [1996].

Note: This video introduces basic concepts of reactance and electrical power. It presents principles of inductive reactance, discusses the relationship between voltage-current in inductors and defines capacitive reactance. Run

time is 27 minutes.

TIO4036

Electronic CIRCUIT TROUBLESHOOTING: THE BASIC PROCESS AND THE SAFE APPROACH. Bergwall, [1995].

Note: This video explains how troubleshooting is used by today's technicians, presents the proper use of hand tools and defines opens, shorts, and static electricity. Run time is 23 minutes.

TIO4037

ELECTRONIC CIRCUIT TROUBLESHOOTING: COMMON FAILURES AND DETECTION AIDES. Bergwall, [1995]. Note: This video introduces common problems, presents measurement methods and analog and digital representations, and explains types of electrical failures. Run time is 20 minutes.

TIO4038

ELECTRONIC CIRCUIT TROUBLESHOOTING: 3TEST METHODS AND EQUIPMENT. Bergwall, [1995]. Note: This video explains measurement vs. substitution methods, introduces the voltmeter and oscilloscope, and details signal tracing, signal injection and power tests. Run time is 21 minutes.

TIO4039

ELECTRONIC TROUBLE SHOOTING: APPLYING THE PRINCIPLES. Bergwall, [1995]. Note: This video explains a sample communications receiver, shows how to test the power system and features signal tracing and signal injecting. Run time is 22 minutes.

TIO4049

FIBER OPTICS EXPLAINED: THE COMMUNICATION PROCESS. Bergwall, [1995]. Note: This video explores the close relationship between electronics and fiber optics, compares light and sound, and introduces the radio frequency spectrum. Run time is 14 minutes.

TIO4050

FIBER OPTICS EXPLAINED: MAKING LIGHT TALK. Bergwall, [1995]. Note: This video details the properties of light and compares audio to light waves, explains sine wave measurement, and introduces the formula $F = 1/T$. Run time is 20 minutes.

TIO4051

FIBER OPTICS EXPLAINED: PUTTING LIGHT TO WORK. Bergwall, [1995]. Note: This video introduces the various types of information that light can carry, explains modulation, and details carrier frequency.

TIO4052

FIBER OPTICS EXPLAINED: USING FIBER OPTICS. Bergwall, [1995].

Note: The video explains how light travels in band fibers, introduces angle of incidence, and demonstrates step-index and graded-index fiber. Run time is 18 minutes.

TIO4053

MULTIMETERS EXPLAINED: AN INTRODUCTION. Bergwall, [1996].

Note: This video details basic features of Analog-Digital multimeter, stresses safety precautions, and compares characteristics and applications of both multimeters. Run time is 15 minutes.

TIO4054

MULTIMETERS EXPLAINED: VOLTAGE AND CURRENT. Bergwall, [1996].

Note: This video demonstrates breadboarding series and provides exercises in measuring voltage. Run time is 16 minutes.

TIO4055

MULTIMETERS EXPLAINED: CONTINUITY AND RESISTANCE. Bergwall, [1996].

Note: This video demonstrates and defines continuity checks using analog and digital multimeters, defines resistance and demonstrates connection of test leads. Run time is 17 minutes.

TIO4057

USING DUAL TRACE OSCILLOSCOPES: SAFETY AND INITIAL SET-UP. Bergwall, [1996].

Note: This video explains the function of oscilloscope and the difference between dual-single trace, introduces basic control blocks and demonstrates proper control settings before turning the scope on. Run time is 18 minutes.

TIO4058

USING DUAL TRACE OSCILLOSCOPES: MEASURING VOLTAGE. Bergwall, [1996].

Note: This video shows how to use graticule to determine peak-to-peak voltage frequency and explains the probe compensation procedure. Run time is 21 minutes.

TIO4059

USING DUAL TRACE OSCILLOSCOPES: COUPLING AND TRIGGERING. Bergwall, [1996].

Note: This video explains the difference between AC ground and DC coupling shows how to determine the DC component of a signal and defines and demonstrates types of triggering. Run time is 21 minutes.

TIO4060

USING DUAL TRACE OSCILLOSCOPES: VERTICAL MODE CONTROL. Bergwall, [1996].

Note: This video demonstrates the use of both channels of scope, shows the norm -CH 2 invert mode and defines the difference between add-alt-chop. Run time

is 19 minutes.

TIO4061

USING DUAL TRACE OSCILLOSCOPES: USING YOUR SCOPE. Bergwall, [1996].

Note: This video demonstrates how to avoid making common mistakes when using scopes and shows how to use both channels to test electronic circuit and convert time to frequency. Run time is 20 minutes.

TIO4062

ADVANCED AC CIRCUITS: TIME CONSTANTS. BERGWALL, [1996].

Note: This video explores relationships among resistors, capacitors, inductors with voltage and presents fundamental applications of time constants. Run time is 30 minutes.

TIO4063

ADVANCED AC CIRCUITS : THE RC CIRCUIT. BERGWALL, [1996].

Note: This video examines sine wave response to the series-parallel RC circuit, reviews AC current and voltage and introduces the concept of impedance. Run time is 24 minutes.

TIO4064 ADVANCED AC CIRCUITS : THE RL CIRCUIT. BERGWALL, [1996].

Note: This video examines sine wave response to series-parallel LR circuits, reviews inductive reactance and investigates the concept of impedance. Run time is 22 minutes.

TIO4065

ADVANCED AC CIRCUITS: THE RLC CIRCUIT. BERGWALL, [1996].

Note: This video examines sine wave response to series-parallel RL circuits and defines impedance, frequency effects, and resonant frequency. Run time is 26 minutes.

TIO4066

ADVANCED AC CIRCUITS: PHASORS & AC PHASE RELATIONSHIPS. BERGWALL, [1996].

Note: This video explores phasor representation of a sine wave and investigates sine wave voltage. Run time is 22 minutes.

TIO5000

BASIC STRIPPING PROCEDURES AND TECHNIQUES.

Note: This program presents basic stripping procedures and techniques. It features basic tools, materials, and equipment; interpreting the artboard, reading job tickets and verifying specifications; inspecting negatives; imposition on layout sheet; creating ruled masking sheets; defining plate and gripper margins; applying tape tension-free; opening image areas; using opaque, positioning instruments and vinyl masking sheets; trimming and positioning halftones; FPO images, attaching halftone negatives, working with bleeds; preventing plate distortions; and adding trim lines. Run time is 45 minutes.

TI05001

ONE COLOR MULTI-FLAT STRIPPING.

Note: This video presents techniques for one color, multi-flat stripping. It demonstrates using punch and pin register system, planning exposure sequences, using rubylith and clearbase, cutting rubylith to borderlines, creating dupes and reverses, film emulsion orientation, cutting clean rubylith windows, eliminating multiple film layers, adding reverse type and subtype, building positive type into a window, working with halftones and tints, using screen angle indicator, silhouetting a halftone using rubylith, and planning for film composition. Run time is 74 minutes.

TI05002

NON-PROCESS MULTI-COLOR STRIPPING.

Note: This video presents techniques for non-process multi-color stripping. It features adding spot color using overlay masks, dropping in color using rubylith, planning exposure sequences, creating marks flat, evaluating multi-color artboards, creating spreads and chokes, planning and using intermediate films, planning emulsion orientations for final films, creating make-ready flats, working with full-page bleeds, using screen tins, building choke knockouts into bleed windows, understanding spaces/diffusion method, and stripping duotones. Run time is 50 minutes.

TI06001 INTRODUCTION TO SEMI-AUTOMATIC WIRE WELDING.

Note: This video shows step-by-step how to set up a Lincoln DC-600 and a LN-9 wire feeder for both gas shielded and flux-cored welding wires. The viewer will learn the fundamental expertise to successfully weld FCAW-SS and GS. Run time is 42 minutes. 1996

TI06002

BASIC ELECTRICITY FOR ARC WELDING.

Note: This program introduces the beginning welder to basic components and terminology of arc welding. The concepts of voltage and amperage, the difference between AC and DC, and the basic electrical circuitry in a power source are presented. Run time is 10 minutes. 1996

TI06003

INTRODUCTION TO INVERTER TECHNOLOGY.

Note: This video presents the technology that has revolutionized arc welding. It features inverters which are smaller, lighter, and more cost effective machines that invert high frequency AC to smooth DC for better welding power. Run time is 22 minutes. 1996

TI06004

BUILDING A CAREER WITH WELDING. Edison Welding Institute, [1999].

Note: This program discusses the opportunities to be found in a welding career. It shows different people talking about their experiences in welding jobs and what is involved in that job. 1999.

TI06005

GAS TUNGSTEN ARC WELDING: ESSENTIALS. BERGWALL, [1998].

Note: In this four-part program, student welders will see what gas tungsten arc welding is and how it operates as well as learn some basic exercises to help them get started. Close-up shots demonstrate key welding techniques for both beginners and welders who are developing their skills. Runs 20minutes.

TI06006

GAS TUNGSTEN ARC WELDING: GETTING STARTED. BERGWALL, [1998].

Note: In this four-part program student welders will see what gas tungsten arc welding is and how it operates as well as learn some basic exercises to help them get started. Close-up shots demonstrate key welding techniques for both beginners and welders who are developing their skills. Run time is 17 minutes.

TI06007

GAS TUNGSTEN ARC WELDING: SETTING UP. BERGWALL, [1998].

Note: In this four-part program, student welders will see what gas tungsten arc welding is and how it operates as well as learn some basic exercises to help them get started. Close-up shots demonstrate key welding techniques for both beginners and welders who are developing their skills. Run time is 17 minutes.

TI06008

GAS TUNGSTEN ARC WELDING: ADVANCED WELDS. BERGWALL, [1998].

Note: In this four-part program student welders will see what gas tungsten arc welding is and how it operates as well as learn some basic exercises to help them get started. Close-up shots demonstrate key welding techniques for both beginners and welders who are developing their skills. Runs 16 minutes.

TI06009

ARC WELDING EXPLAINED: BASIC PRINCIPLES. Bergwall, [1997].

Note: This video introduces the basic concept of electric arc welding, reviews basic electrical fundamentals, describes how to build a basic welding circuit and demonstrates actual welding techniques.

TI06010

ARC WELDING EXPLAINED: GAS TUNGSTEN - ARC WELDING. Bergwall, [1997].

Note: This video demonstrates the actual welding process, reviews special features of the gas tungsten welding machine, explains how to choose and prepare the electrode for use, and compares water-cooled to air-cooled torches.

TI06011

ARC WELDING EXPLAINED: GAS METAL & FLUX CORED - ARC WELDING. Bergwall, [1997].

Note: This video explains the common core-wire electrode used by both processes, describes the welding circuit of both processes, introduces the particular characteristics of the Gas Metal Arc Welding machine, and highlights

advantages of Flux Cored Arc Welding.

TI06012

WELDING SHOP SAFETY: CYLINDER SAFETY. Bergwall, [1996].

Note: This video describes how to safely store and handle oxygen and acetylene cylinders.

TI06013

WELDING SHOP SAFETY: OPERATOR & FIRE SAFETY. Bergwall, [1996].

Note: This video describes the dangers of noxious smoke and fumes and details keeping the welding area free of flammable materials.

TI06014

WELDING SHOP SAFETY: PERSONAL SAFETY & PROPER ATTITUDE. Bergwall, [1996].

Note: This video describes the importance of personal safety when using welding machines within the work environment.

TI06015

WELDING SHOP SAFETY: SAFE USE OF EQUIPMENT. Bergwall, [1996].

Note: This video compares the flow of electricity in an arc welding system with the flow of a simple electrical current.

TI06016

INTRODUCTION TO OXYFUEL WELDING. Meridian Education Corporation, [1994].

Note: This video clearly explains and demonstrates the careful and safe method of using the combination of acetylene and oxygen gas cylinders. Pressure regulators, check valves, and hoses and fittings are demonstrated as well as torch tubes and tips. Clear instructions on ignition, use of the outfit, and shutting down are provided along with tips on flame adjustment and methods to direct it to the work area. Also demonstrated are various welding techniques and types of welds. Run time is 14 minutes. 1994.

TI06017

INTRODUCTION TO SHIELDED METAL ARC WELDING. Meridian Education Corporation, [1994].

Note: This video explains the difference between alternating current and direct current arc welding machines, and show how an electrical current melts electrodes to supply filler metal. Also demonstrated are electrode leads, workpiece leads, and electrode holders. Electrode sizing and its importance are explained. Set-up and shut-off instructions are shown step-by-step as well as how to use equipment safely. Uses of shielded metal arc welding are discussed and demonstrated. Run time is 12 minutes. 1994.

TI06018

INTRODUCTION TO GAS TUNGSTEN ARC WELDING. Meridian Education Corporation, [1994].

Note: Gas tungsten arc welding, or TIG welding, presents special safety concerns. Viewers are warned of the suffocation hazards present when working with inert gases and why good ventilation is required. The video also provides an explanation of how TIG welding differs from other types of welding....in particular the uses of non-consumable electrodes. Electrode leads, hoses, regulators, and collets are demonstrated and explained as well as the use of the post flow timer to protect the weld from contamination. Also discussed are using the correct collet set and electrode size and type needed for the job. Run time is 11 minutes. 1994.

TIO6019

INTRODUCTION TO GAS METAL ARC AND FLUX CORE WELDING. Meridian, [1994].

Note: There are a lot of similarities between gas metal arc welding (MIG) and flux core arc welding, including the use of direct current to provide constant voltage. Viewers will also learn about the different types of electrodes wires used in each outfit. Wire feeders are demonstrated along with the spools that feed them - containing several hundred feet of electrode wire...allowing welders to make long continuous welds. Students see how to position the electrode and how to establish a good weld pool. As in all of the welding videos, safety practices are clearly demonstrated and explained. Run time is 11 minutes. 1994.

TIO7004

FIRST STEP FOR AUTO CAD.

Note: This cd-rom lesson set contains lessons, pre-tests, self tests, and post tests. The lessons have been structured to facilitate the learning process for autocad.

TIO7005

AUTOCAD RELEASE 13: THE FLOOR PLAN. [01/01/96].

Note: This video features creating a simple floor plan for a house. While constructing this drawing viewers will examine Auto CAD's Graphics User Interface (GUI), learn how to create and use custom Multiline Styles, and explore the use for blocks and entity grips. Participants also examine how to move around in the drawing using the Aerial Viewer. Run time is 30 minutes.

TIO7006

AUTOCAD RELEASE 13: ELEVATION DRAWINGS. [01/01/96].

Note: This video features completing the elevation drawings for a house. While finishing these drawings some of Release 13's new editing commands will be used, as well as the procedures for placing additional elements through the use of construction lines. Viewers will also learn to use hatch patterns to quickly represent finish materials and how to add text and annotations to a drawing through the use of AutoCAD, MTEXT, and LEADER commands. In addition, Window's Object Linking and Embedding (OLE) capabilities is introduced. Run time is 30 minutes.

TI07007

AUTOCAD RELEASE 13: WORKING DRAWINGS. [01/01/96].

Note: This video examines the construction of a typical wall section for a house and how to quickly copy entities and use complex linetypes. In addition, viewers will explore how to create and use custom dimension styles while adding dimensions to the floor plan created in Part 1. Next, concepts of model and paper space, and paper space scaling to plot drawings at different scales on the same sheet of paper are presented. Run time is 30 minutes.

TI07008

AUTOCAD RELEASE 13: THE RENDERING. [01/01/96].

Note: Viewers are introduced to the basic concepts of computer aided renderings in this program. It begins with a definition of the rendering and a brief examination of the model used to create renderings. Next, the video examines the issues that should be considered before beginning a rendering. The video then takes the viewer through a step-by-step tutorial showing many of the techniques used to render a complete model. The video concludes by examining how rendered images can be exported for use in other applications. Run time is 30 minutes.

TI07014

UPGRADING PC HARDWARE: CREATING A SOFTWARE RESCUE KIT. BERGWALL, [1997].

Note: This video outlines the steps you should perform to back up boot files and hardware configuration files for computers running both the Windows 3.1 and Windows 95 operating systems. Run time is 24 minutes.

TI07015

UPGRADING PC HARDWARE: UPGRADING RAM. BERGWALL, [1997].

Note: This video introduces you to concepts of computer memory such as ram vs rom, different types of ram, how ram is classified, and SIMM vs DIMM modules. In addition, you'll be shown in detail the procedure for adding SIMM modules to a typical PC. Run time is 18 minutes.

TI07016 UPGRADING PC HARDWARE: EXPANSION CARDS. BERGWALL, [1997].

Note: This video examines the correct procedure for replacing an internal modem in a computer running the Windows 95 operating system. The physical removal of the old modem and installation of the new modem is shown in detail. In addition, you'll learn how to configure the new modem, and learn some troubleshooting steps you can take when "plug and play" technology does not work. Run time is 22 minutes.

TI07017

UPGRADING PC HARDWARE: ADDING A HARD DRIVE. BERGWALL, [1997].

Note: This video explores how to add a second hard drive to a computer running the Windows 95 operating system. During the procedure, you'll be introduced to the concept of Master vs. Slave drive configurations. After the drive is installed, you'll learn what steps to take to configure the new hard drive,

including updating the bios, as well as formatting and partitioning the drive. Run time is 24 minutes.

TI07018

MARIE TURNBULL. TECHNICAL DRAWING - BASIC CONCEPTS FOR DRAFTING AND CAD: LINES AND SCALES. BERGWALL, [1999].

Note: This video explores the most common linetypes found within the alphabet of lines. The concept of scale is also defined and examined. In addition, three common measuring instruments used in technical drawing are introduced: the architect's scale, the engineer's scale and the metric scale. Run time is 20 minutes.

TI07019

MARIE TURNBULL. TECHNICAL DRAWING - BASIC CONCEPTS FOR DRAFTING AND CAD: FREEHAND SKETCHING. BERGWALL, [1999].

Note: This video provides detailed instruction in the process of freehand sketching. Step-by-step instruction in topics from holding the drawing pencil to sketching basic geometric shapes are shown. Techniques for drawing more difficult shapes, such as ellipses and irregular curves are also explored, as well as tips and tricks you can use in order to make sure your drawings accurately describe the proportions of the object being sketched. Run time is 20 minutes.

TI07020

MARIE TURNBULL. TECHNICAL DRAWING - BASIC CONCEPTS FOR DRAFTING AND CAD: CREATING MULTIVIEW DRAWINGS. BERGWALL, [1999].

Note: This video provides detailed instruction in the use of orthographic projection for the creation of the principal views of a three dimensional object. The construction of auxiliary views is also introduced. In addition, the use of section views is examined, including the wide variety of section views used in both architectural and mechanical drafting. Run time is 20 minutes.

TI07021

MARIE TURNBULL. TECHNICAL DRAWING - BASIC CONCEPTS FOR DRAFTING AND CAD: DIMENSIONING AND DRAWING LAYOUT. BERGWALL, [1999].

Note: This video provides an introduction to the basic components of a dimension, and examines some fundamental rules for construction and placement of dimensions in a drawing. The concept of dimension tolerancing is also introduced, as well as standard conventions for laying out an individual drawing or drawing series. Run time is 20 minutes.

TI07022

BASIC DIGITAL MATH: INTRODUCTION TO DIGITAL TECHNOLOGY. Bergwall, [1996].

Note: This video describes purposes for digital techniques, explores various design features, and defines numbering systems. Run time is 13 minutes.

TI07023

BASIC DIGITAL MATH: IDENTIFYING NUMBER SYSTEMS. Bergwall, [1996].

Note: This video explains conversion of decimal to binary, present the additional systems of Octal, BCD, and hexadecimal, and examines binary type codes. Run time is 17 minutes.

TI07024

BASIC DIGITAL MATH: USING BINARY NUMBERS. Bergwall, [1996].

Note: This video presents addition, subtraction, multiplication, and division of binary numbers. Run time is 17 minutes.

TI08000

BASIC AIR CONDITIONING: INTRODUCTION TO FUNDAMENTALS. [1996].

Note: The two types of residential air conditioning--self-contained and central--are shown in this program which also presents physical properties, and laws and terms associated with air conditioning. Fahrenheit and centigrade temperature measurement and the relationship between heat and air pressure are discussed. Run time is 18 minutes.

TI08001

BASIC AIR CONDITIONING: COOLING EQUIPMENT OPERATION. [1996].

Note: The primary components of the air conditioning system are introduced and their functions are explained in this segment. Run time is 25 minutes.

TI08002

BASIC AIR CONDITIONING: ELECTRICAL CONTROLS. [1996].

Note: Starting the compressor, fan controls, line voltage, and pressure and thermostatic controls are covered in this program. Run time is 25 minutes.

TI08003

BASIC AIR CONDITIONING: TROUBLESHOOTING. [1996].

Note: Covered in this program are detection and repair of refrigerant leakages, and causes for poor distribution, low charge and common compressor problems. Run time is 21 minutes.

TI08008

HVAC: THE REFRIGERATION CYCLE. CEV Multimedia.

Note: With computer animation and an actual air conditioning system, students view and understand the purpose of the four major HVAC components (compressor, condenser, evaporator and metering device) as they relate to the refrigeration cycle. The function of the refrigeration cycle is to absorb heat at one location and dispose of it in another location. Proper understanding of the vapor compression refrigeration cycle is necessary for anyone entering the field of air conditioning or refrigeration. The pressure-temperature relationship of the refrigerant as it flows through the cycle

will be explained, along with brief discussions on refrigerants and basic terminology. Section quizzes and a comprehensive final quiz are included. Run time is 17 minutes. 2001.

TI08009

CAREERS: HVAC INDUSTRY. CEV Multimedia, [2001].

Note: From service technicians to engineers, there are many potential career choices within the HVAC field. The program allows you to hear first-hand from employees in these areas and what you can expect from the HVAC industry. Learn how service technicians, engineers, draftspersons and other professionals spend their days on the job. A character analysis quiz is presented to help you decide if the HVAC industry is the career choice for you. Run time is 19 minutes. 2001.

TI08010

HVAC: SERVICE AND INSTALLATION TOOLS. CEV Multimedia, [2001].

Note: The first step to working in the HVAC industry is learning about the most widely used tools and materials and how to properly handle them. The videoactive presentation is designed to educate students on service and installation tools, such as reamers, tube benders and tube cutters. An air conditioning and refrigeration technology professor demonstrates 15 tools. Run time is 27 minutes. 2001.

TI08011

HVAC: SHEET METAL TOOLS AND MATERIALS. CEV Multimedia, [2001].

Note: Sheet Metal Tools and Materials is a VideoActive program designed to demonstrate sheet metal tools and materials most frequently used in the HVAC industry. James Merrick, Program Chair and Instructor, Air Conditioning and Refrigeration Technology, and Danny Moran, Instructor, Air Conditioning and Refrigeration Technology, Texas State Technical College, educate students on the operation and handling of approximately 20 different types of sheet metal tools and materials. Items covered include aviation snips, double cut shears, open mesh cloth and many more. Run time is 27 minutes. 2001.

TI10006 IN THE BLINK OF AN EYE: AN OCCUPATIONAL EYE SAFETY PROGRAM.

[02/02/96]. Note: This video, featuring Richard Karn who portrays Al Berland on "Home Improvement", presents eye safety techniques for those in factory or outdoor site. It discusses identifying hazardous locations in the workplace and appropriate eye protection. Run time is 11 minutes.

TI10015 MOWING RULES.....SAFETY ROCKS!

NEWLY ADDED

HS From the Outdoor Power Equipment Institute. This video is designed to teach young people how to use outdoor power equipment safely. Rock music and a theme that appeals to young people are used to draw their attention to the video's safety messages. The video entwines the safety messages by telling the story of a teen rock band in a "Battle of the Bands" competition. They're good musicians, but they're up against a band whose instruments are much better than theirs. So to earn money to buy new equipment, the group

mows lawns and does other outdoor yard work, and give viewers safety tips on using outdoor tools along the way. Appropriate for GRADES 4 - 12. Total Running Time is 18 minutes.

TI10016

MEASURING TOOLS EXPLAINED: PART 1 THE VERNIER CALIPER. [01/01/96].

Note: Part one of this six tape series features the vernier caliper, an explanation of scale measurement.

TI10017

MEASURING TOOLS EXPLAINED: PART 2 THE OUTSIDE MICROMETER. [01/01/96].

Note: Part two of this six tape series features the outside micrometer.

TI10018

MEASURING TOOLS EXPLAINED: PART 3 INSIDE MICROMETERS. [01/01/96].

Note: Part three of this six tape series features the inside micrometers.

TI10020

TABLE SAW GUARDING "THROUGH SAWING".

Note: This video shows the Occupational Safety and Health Administration (OSHA) guarding requirements for hand-fed ripping and crosscutting. Learn about push sticks and featherboards, and the narrow ripping jig, and tips on determining where the blade will cut without lifting the guard. An instructor's guide and post test is included. Run time is 19 minutes.

TI10021

PRECISION MEASURING TOOLS: USING THE VERNIER CALIPER. Bergwall, [1996].

Note: This video shows the limitations of the six inch steel ruler and gives practice in reading external and internal scales. Run time is 19 minutes.

TI10022

PRECISION MEASURING TOOLS: INTRODUCTION TO THE OUTSIDE MICROMETER. Bergwall, [1996].

Note: This video introduces parts of the mike, demonstrates how a micrometer is read to a thousandth-tenth of a thousandth and gives reading practice. Run time is 18 minutes.

TI10023

PRECISION MEASURING TOOLS: MEASURING WITH BORE GAUGES. Bergwall, [1996].

Note: This video shows one inch inside micrometer with a reversed scale and another inside mike with longer rods. Run time is 18 minutes.

TI10024

PRECISION MEASURING TOOLS: WORKING WITH DEPTH GAUGES. Bergwall, [1996].

Note: This video shows the limitations of a rule depth gauge and describes precision of micrometer depth gauge. Run time is 15 minutes.

TI10025

PRECISION MEASURING TOOLS: USING DIAL INDICATORS. Bergwall, [1996].

Note: This video describes the 1/1000 dial indicator and how it works and shows the indicator setup on the comparator stand. Run time is 15 minutes.

TI10026

PRECISION MEASURING TOOLS: EXPLORING PROTRACTORS AND GAUGE BLOCKS. Bergwall, [1996].

Note: This video shows parts of a protractor, describes the dimensions of a circle and explains the use of a 90 degree steel square. Run time is 18 minutes.

TI10027

BLUEPRINT READING SKILLS EXPLAINED: VIEW AND LINE INTERPRETATION. BERGWALL, [1998].

Note: This video shows the orthographic project and sequential projection of part views, contains examples of auxiliary views, and defines and identifies the various lines found on the blueprint. Run time is 14 minutes.

TI10028

BLUEPRINT READING SKILLS EXPLAINED: DIMENSIONS AND TOLERANCE SPECIFICATIONS. BERGWALL, [1994].

Note: This video shows the use of detail and assembly drawing, explains the conventional and baseline method of print demonstrating and details the use of datums. Run time is 20 minutes.

TI10029

BLUEPRINT READING SKILLS EXPLAINED: AUXILIARY PRINT INFORMATION AND GEOMETRIC TOLERANCING. BERGWALL, [1994].

Note: This video explains the use of the title and revision box, shows application of scale to the drawing, and details meaning of notes and symbols used on blueprints. Run time is 16 minutes.

TI10030

BLUEPRINT READING SKILLS EXPLAINED: WELDING SYMBOLS. BERGWALL, [1994].

Note: This video details welding symbols and explains how the symbols are used by welders to follow plans. Run time is 16 minutes.

TI10031

PORTABLE POWER TOOLS VOLUME IV. Siegel & Assoc.

Note: Safety videos have become an indispensable way to train employees. You are encourage to try any of our videos and join the ranks of private and public organizations that are increasingly turning to video as a fast and effective way to train their employees. Topics geared to meet your needs include programs on lawnmower safety, tractor safety, pesticide safety, power tool safety, ball field maintenance and safety as well as titles on pruning, water management and portable power tool maintenance.

TI10032

POWER TOOL PRINCIPLES: SAFETY AND TECHNIQUES VOLUME I - STATIONARY POWER SAWS. Siegel and Assoc.

Note: These are the core power tools in any wood shop. Whether you're a high school student new to the world of woodworking, or an adult who is putting together your first shop at home, POWER TOOL PRINCIPLES is an invaluable introduction to the mentality behind safe operating techniques... an approach to power tools that comes from a healthy respect for the sophisticated machines that are today's power tools. Run time is 25 minutes.

TI10033

ELECTRICAL SAFETY. National Institute for Occupational Safety and Health.

Note: This video presentation is one component of a curriculum on occupational safety and health for the electrical trades.

FACS2024

THE FRANK LLOYD WRIGHT WAY: APPRENTICES TO GENIUS NEWLY ADDED

For Grades 7-12 This program features America's most famous architect, Frank Lloyd Wright, as told from from the perspective of four of his apprentices. From 1932 to 1956, the four collectively were disciples of one of the most creative architect spirits of then 20th century at the height of his career. They studied under Wright and worked beside him on many of his most famous buildings. He gave then organic architecture and a way to live. These apprentices form a link to our architectural historic past. Using historic film footage, still photographs, drawings, and building plans, these four apprentices share anecdotes about Wright to help provide you an intimate portrait of this extraordinary American genius. A Teacher's Guide is printed inside the VHS cover. Total Running Time is 51 minutes.